

In re Patent Application of:  
RAYNOR ET AL.  
Serial No. 09/993,387  
Filing Date: NOVEMBER 16, 2001

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#### REMARKS

The Examiner is thanked for the thorough examination of the present application. The title has been amended to more fully describe the claimed invention as requested by the Examiner. Claims 11, 13, 21, 22, 30, 32, and 33 have been amended to further define the invention over the prior art. Independent Claim 11 was amended to include the subject matter of Claim 12. Similarly, independent Claim 30 was amended to include the subject matter of Claim 31. Accordingly, Claims 12 and 31 have been canceled. Independent Claim 21 was also amended.

It is respectfully requested that the Examiner withdraw the IDS listed under attorney docket no. 20053 to Applicants Qiong Li et al. from consideration. These pages were not filed by the Applicants of the present application and therefore should be removed.

The patentability of the claims is discussed in greater detail below. Favorable reconsideration is respectfully requested.

#### I. The Claimed Invention

Amended independent Claim 11, for example, is directed to a solid state imaging device including a two-dimensional array of pixels defining an image plane. The solid state imaging device also includes readout electronics comprising a store circuit laterally adjacent the image plane for reading signals therefrom. The solid state imaging device further includes a multiconductor signal bus connected between said array of pixels and said readout electronics, wherein each conductor in said multiconductor signal bus provides a readout channel dedicated to one pixel. Amended independent Claim 30 is a method counterpart of Claim 11 and includes

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similar recitations.

Amended independent Claim 21 is directed to a solid state imaging device including a two-dimensional array of pixels defining an image plane, each pixel comprising a photosensitive diode, and a switching circuit for resetting and discharging the diode. A multiconductor signal bus is connected to the array of pixels, wherein each conductor in the multiconductor signal bus provides a readout channel dedicated to one pixel. Readout electronics are laterally adjacent the image plane and are connected to the signal bus for reading signals from the array of pixels.

## II. The Claims Are Patentable

The Examiner rejected independent Claims 11, 21, and 30 and prior dependent Claims 12 and 31 as unpatentable over the Lee et al. patent. The Lee et al. patent discloses a pixel sensor comprising an array of pixels on a semiconductor substrate where a selected row is addressed and read out to different circuit blocks. The Examiner correctly notes that the Lee et al. patent also discloses channels 1-4 column-address/signal-processing/output 11-14 laterally adjacent the image plane for reading signals from the pixel array.

In contrast, amended Claim 11, for example, is directed to a solid state imaging device including a multiconductor signal bus connected between an array of pixels and readout electronics, wherein each conductor in the multiconductor signal bus provides a readout channel dedicated to one pixel. In other words, there is no addressing between the array of pixels and the readout electronics because each conductor is dedicated to one pixel. The Lee et al. patent fails to provide such because it requires addressing between the between the array of pixels and the readout electronics.

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For example, as described at column 4, lines 32-34, "four parallel channels are thus implemented where 4 pixels from a selected row are addressed and read out to 4 different circuit blocks". Amended independent Claims 21 and 30 include recitations similar to Claim 11.

Accordingly, independent Claims 11, 21, and 30 are patentable. The dependent claims, which recite yet further distinguishing features of the invention, are also patentable, and require no further discussion.

### III. CONCLUSION

In view of the amendments to the claims and the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



DOUGLAS J. VISNIUS  
Reg. No. 48,012  
Allen, Dyer, Doppelt, Milbrath  
& Gilchrist, P.A.  
255 S. Orange Avenue, Suite 1401  
Post Office Box 3791  
Orlando, Florida 32802  
407-841-2330  
Agent for Applicants

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CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has been forwarded via facsimile number 571-273-8300 to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 this 16<sup>th</sup> day of September, 2005.

